

From boatanchors@theporch.com Tue Jan 17 18:32:05 1995  
Date: Tue, 17 Jan 1995 16:06:31 -0600  
Message-Id: <199501172205.RAA60940@ee.duke.edu>  
From: "Rhett T. George" <rtg@ee.duke.edu>  
Subject: <didn't bother with a subject>

- Greetings -

The soft glow of functional vacuum tubes is hard to beat. Powering filament tubes down to a suitable fraction of the normal operating filament voltage makes a good deal of sense in terms of lessening thermal shock. The white-hot filament inside an 826 is something I should want to turn down to a dull red. After all, I do not use a Gonset 2 m linear amp for a reading lamp.

To the point, now. Indirectly heated cathodes, coated with appropriate low-work-function metals, were found to develop increasing resistances between the nickle cathode cylinder and the emissive surface if left hot with no current flowing. This showed up in certain applications in WW II where the equipment was left with heaters on and plate circuits off. It was ordinarily referred to as "sleeping sickness" and was cured by replacing the tube. Keeping these cathodes warm, not to the point of seeing any dull red glow, may be satisfactory.

In my Heathkit VTVM I have a few thousand ohm resistor across the off-on switch to keep the innards warm and dry. I lived in Florida when I built this one. No mildew has developed on the circuit board and it still operates fine with the original tubes.

Rhett George - KE4HIH

From boatanchors@theporch.com Tue Jan 17 11:34:58 1995  
Date: Tue, 17 Jan 1995 08:50:28 -0600  
Message-Id: <Pine.SUN.3.91.950117083143.2194B-100000@ncrsun7>  
From: Kevin Anderson <anderson@ncrsun7.ncr.usace.army.mil>  
Subject: antenna, HW-16, straight key, xtals --> KB9IUA on the air!

Boatanchor gang,

Finally, after a year of pinching pennies and dreaming, I got a 40m dipole up. Ok, so its NVIS (aka, Midwestern Cloud Warmer) at 20 feet or so, with a slight slope to the east, and I live in a valley, but it is up. A used antenna tuner should be arriving any day now. My HW-16 is xtal driven, so listen for my faulty code on 7112, 7117, 7132, and 7137. I tried some last night (0200 to 0300 UTC) with no luck, so ended up sharpening my ear to W1AW. My 7040 crystal with tuner will let me get on 15m 21120, so watch there too. My evenings are unpredicatable, so can't set up schedules (yet), but I hope to work Novice Roundup. Now to save money for a HG-10B. Sounds like the earlier days.

Cheers.

73 de Kevin, KB9IUA

\* \* \* \* \*  
Kevin L. Anderson, CENCR-PD-W, U.S. Army Corps of Engineers  
Rock Island District Office, Planning Div.-Waterway Systems  
Rock Island, Illinois 61204-2004, USA phone:(309) 794-5586  
e-mail: anderson@ncrsun1.ncr.usace.army.mil  
\* \* \* \* \*  
Opinions expressed here are my own and do not represent the  
U.S. Army Corps of Engineers or the Federal Government.

From boatanchors@theporch.com Tue Jan 17 03:54:06 1995  
Date: Tue, 17 Jan 1995 01:42:29 -0600  
Message-Id: <950117073859\_72227.1640\_EHM34-1@CompuServe.COM>  
From: David Stinson AB5S/7 <72227.1640@compuserve.com>  
Subject: BC-221 Crystals

By the way...does anyone have any of  
those 1000 KHZ crystals available?  
They look like black metal octal  
tubes, but are really crystals.  
TNX DE AB5S/7 Dave Stinson  
Lost Wages, Nevada.

From boatanchors@theporch.com Tue Jan 17 03:44:28 1995  
Date: Tue, 17 Jan 1995 01:26:44 -0600  
Message-Id: <950117072422\_72227.1640\_EHM43-1@CompuServe.COM>  
From: David Stinson <72227.1640@compuserve.com>  
Subject: BC-221 Freq Meters

I'm happily restoring four BC-221 Frequency Meters--  
a wonderful piece of BA test equipment every Anchorite  
interested in military gear should own. They're really  
cleaning-up nicely with few electrical problems and few  
or no modifications. I saw Don Merz ask about spares  
in the "SPARE PARTS" compartments.

My J, M and T models were built in a steel, black  
wrinkle-finish case. The "SPARE PARTS" compartments  
contain a spare set of tubes and the spline wrench(s) to  
remove the knobs. A spare 1000 KHZ crystal was in this  
compartment in the M model, and inside the RF deck  
in the J & T. These are missing.  
Was there supposed to be anything besides the tubes  
and wrenches in the spares compartment?

My AH model, which was built in an olive drab wooden case,  
has only a web strap with a snap in the front compartment

which is not marked "spares" like the others. Does anyone know what went in this compartment?

I have the A+ battery harness for the J, M and T models but not the B+ battery harness. Does anyone have one I could use as a pattern for replication? I have the A+ battery connecting plate for the AH model, but it's also missing the B+ harness/plate.

Funny thing--the M and AH models use a 6SJ7 and a 6SJ7Y. Anyone know what's special about a \*Y\*?

Also, does anyone have a junker with a good battery compartment door? Someone removed the door from the "T".

Thanks to the great BA community!  
73 DE AB5S/7 Dave Stinson  
Lost Wages, Nevada

From boatanchors@theporch.com Tue Jan 17 08:44:32 1995  
Date: Tue, 17 Jan 1995 06:31:18 -0600  
Message-Id: <950117073241\_3812894@aol.com>  
From: JosephWP@aol.com  
Subject: Re: BC-221 Freq Meters

Dave,

>>>  
Funny thing--the M and AH models use a 6SJ7 and a 6SJ7Y. Anyone know what's special about a \*Y\*?  
>>>

The Y indicates that the tubes have a special low loss base designed to enhance stability.

Joseph Pinner +  
Lafayette, LA  
KC5IJD

From boatanchors@theporch.com Tue Jan 17 15:56:11 1995  
Date: Tue, 17 Jan 1995 12:41:36 -0600  
Message-Id: <9501171908.AA119129@csemail.cropsci.ncsu.edu>  
From: rdkeys@csemail  
Subject: Re: Bringing up tubes gently

>

> On Fri, 13 Jan 1995 rdkeys@csemail.cropsci.ncsu.edu wrote:  
> (And very sensibly) (But of course I have to add my US\$0.02)

All zwei pfennigs worth are welcome amongst de Boatanchorites, excepting when the mailer gets kerchunked with overload..... this will be my last big posting of the day .....(:+{.

> > On the subject of bringing up tubes gently, especially [...]  
> > transmitting.....  
> >  
> > 1. Good design of plate circuits in my experiences has usually always  
> > had screen voltages taken from the plate line after suitable dropping  
> > regulating circuitry.  
>  
> Yes and no; this is typical of the better sorts of transmitters one  
> sees in amateur and communications service but many of the large  
> commercial rigs I have worked with use a seperate screen supply, with  
> control-ladder circuitry to keep the screen voltage from coming up before  
> the plate.  
> I mention this 'cos it's something you \*might\* see in the larger  
> ex-military or retired broadcast transmitters (and there's folks who  
> convert the 250 to 1 kW AM-broadcast boxes to 160m rigs). The control  
> ladders in some of these transmitters can be preposterously arcane--the  
> blueprints for the control logic of the big RCA TV thing I work with are  
> two feet wide and \*twenty\* feet long, and still omit the smaller circuit  
> blocks! That's an extreme example, of course; something like a nice  
> little Collins 20V1 (a fine MW transmitter you can about plug into the  
> dryer/range outlet) is quite a bit simpler. Still, it's something to bear  
> in mind.

Good point.

Most Military sets of 125 watts and up will have separate lines for screens and plates for 803/813 sized tubes and up. Dynamotor rigs are usually exceptions and will pull screens from dropping lines, unless it is the ART-13 which used taps on the dynamotor windings for plate/screen.

As a simpleton simeon amongst the Boatanchorites, I tend to prefer the safe and simple method of bringing up the screen and plates together from one HV line, regardless of the stage (oscillators usually separately powered, tho). It makes life much easier. Even if the rig has need of two separate lines for screen and plates, or most often for interstages (both screens and plates) and finals screens on one line and finals plates on a second line, I will run the two together so that I never inadvertently ferget the plates when I flipped the screens on....== ZAP goes the tubes.

Sometimes you can do this from a common dropping line, via things like light bulbs for regulators or drops, or big resistor networks (love those

200 watt resistors for such use!).

Time delay relays are quite common on larger things, and that works pretty well. My problem is that I usually don't have the right delay relay that I want to use, from the junk box, so a variac and switch usually sub, just fine.

For sure I was not thinking of the AM BCST rigs that abound on 160. Gee, I wonder how well one of those could be made to key CW..... (:+/.). NOT....

I know, hows about a Press Wireless rig fer starters..... (:+}}..... Maybe one of the big Western Electrics..... Yeah, that would make my day! What about one of the big Collin's FRT-\* rigs in the shack..... (:+}}..... Actually, such rigs can be quite fine, even the big ol' navy jobs, but they are GIGA Boatanchors, and usually a day late and a buck short in my times. Before I go on the final watch, tho, I would love to run a QSO on one of those big behemoths. To date, the BC-610 has been my biggest etherburner, and that finally had to go QRT because it was so heavy it was falling through the old wooden floor in my 1910 vintage apartment.

>  
> [...]  
>  
> > 3. Good design of transmitters in general in my experiences has always  
> > allowed walking up the filament and plate circuit voltages in a slow  
> > even manner, rather than zapping the circuits with inrush current  
> > with the flip of a switch.  
>  
> Generally the case--some small AM broadcast machines don't have  
> step-start, however, and adding it would be a good idea (especially if  
> you \*are\* going to plug it into a dryer outlet!). :)

Most all my critical stuff has at least separate power supply switches for filament and plate/screen or variacs on them so that one can't rapidly bring things up so fast as to burn filaments.

> For those who may be new to big tubes, a typical step-start system  
> introduces some series resistance in the primary of the power  
> transformer(s), and then shorts it out after a specified interval in a  
> sort of high power version of the thermistor inrush-suppressor described  
> earlier for receivers.

Good point. I had forgotten about the ancient trick of putting a 100/200 watt light bulb in series with one side of the primary and a switch around it. Bring it up with the switch open, and then close the switch for running speed. I did this on my 0-20VDC 50 A 50-1000hz supply that I

use on the 12 volt rigs --- a start/run switch. It works great!  
Dates from the 1920's QST's, if I remember correctly.

> Other systems used include multistep-starts, use of reactance rather  
> than resistance, and such oddities as the 50kW "light dimmer" used to  
> ramp up the B+ in some late Collins/Rockwell/Varian-Eimac FM rigs. (!!!)

EEEEEEK, I would hate to be around the hash from such a device if it were not just a plain variac or resistance. I have run across motorized variacs from various kinds of equipment, and that sort of thing would be a reasonable device to use, if one could find them when needed, and not kill the piggy bank.

>  
> ...It occurs to me that the smaller panel-mount Variacs are cheap  
> enough that some folks may want to use them for small to medium-sized  
> rigs, to "ramp up" the rails manually. Nothing wrong with that--note,  
> however, that the Variac 10B and its bigger cousins hold the brush in  
> place with nothing but spring tension; soldering it in with a big iron  
> improves the life, especially if you're running it near rated maximum  
> current. They unsolder just fine when replacement time comes.

Good point. I usually opt for the bigger variac, if possible, but hard wiring the brush is probably a good idea to keep resistance to a minimum.

>  
>  
> > 4. Good design of filament circuits in filamentary driven tubes (not  
> > indirectly heated ones) in my experiences has always allowed running  
> > the filaments at reduced voltage of up to -10 percent, depending  
> > upon need, for standby periods and reduced power emissions.

>  
> This one, I've not seen except in some mobile rigs. However, every  
> commercial rig I've worked with had a means of varying the filament  
> voltage and the rule of thumb is to put the tube in, run it at rated fil.  
> volts for a day, then back down the voltage 'til just before power starts  
> to droop. As the tube ages, you run it up. This will \*greatly\* prolong  
> the life of the tubes. (We get a couple of years of near-continuous duty  
> from the 4CX24,000s, most of which they spend at about 9V or less on the  
> 10V-rated filaments)

All my ancient WWII and biggie boatanchor rigs usually have some sort of filament control resistance to set filament voltages. ALL filamentary driven tubes SHOULD have such control. Not needed on indirectly heated things that most of us are LIKELY to run in the average boatanchor, such things as 4CX25,000s and their lesser brothers kindly excepted from the discussion. I can't remember any ham rigs, tho with filament controls that were commercially made, after WWII. Most homebrew/commercial ham stuff

of the 50's era all seemed to be switch and run see how bright the filament got! Modern lineears are included in this bunch. BADBADBAD for longevity.

I have never run things bigger than 4CX250's in the indirectly heated class, and 833's in the filamentary class. GEEESH that would be one big boatanchor Hartley oscillator for 200 meters and down running a 4CX25,000! Nah, I could probably not even keep the filaments lit for very long on my budget.....

>  
> > Alas, the reality is that mostly only my rigs seem to be designed this  
> > way. Some of the WWII era rigs have such provisions, and most have a  
> > filament control resistance of some sort. Almost none of the amateur  
> > gear of the era seems to have such controls. In the ham gear, it usually  
> > was ZAP and run-with-it.

>  
> Indeed! However, ham handbooks of the era do talk about accomplishing  
> most of these tasks, except for step-start. One of the nicer gimmicks is  
> that of using a cathode-type receiving tube known to heat up slowly to  
> drive the B+ interlock relay, preventing application of high voltage to  
> the finals 'til that tube was warmed up.

Good idea, as also are thermal time delay relays, as used in the BC-610, etc. But, for cheapskates like me who prefer lots of knobblies, an overly abundant assortment of panel meters and switcheroos of all kinds at hand, and a HUGE startup checklist, a well chosen variac or light bulb or two with appropriate switches will mostly do. I tend to be a simpleton simeon in my HB designs and use the KISS approach, mostly. Years after the fact I can usually still read the chassis wiring or maybe find my notes, and not be totally befuddled with some arcane/wierd/very different stepping system well forgotten.

>  
>  
> > [...] Even the mere idleing of tubes at E-5% rated filament voltage  
> > when unloaded will give a 2 X life expectancy.  
>  
> In which case, especially with expensive and/or rare tubes, it's worth  
> the cost of another relay and power resistor to do it!

ALWAYS on expensive and rare tubes. I would never run any 20's filamentary tubes or any pre-60's filamentary transmitting tubes without idleing them between times. My stock of precious '01A's is never so big that I can afford to bloooooop a filament unduly.

> The added complexity to the T/R switching is insignificant; something I  
> have noticed is that a lot of prewar amateur stations used \*very\*  
> bare-bones T/R & control arrangements, which can be much improved.

> Suitable relays are a lot easier to come by these days.

Yes, for sure. Also, anytime one does such switching, make SURE the HV is well shielded/protected/insulated/hidden from unknowing/forgetful fingers apoking into the works. Anymore, I always run my HV through RG-8 with the shield grounded to keep any chance of zapping to the minimum. (Zapping me that is ---- once across 1000 vdc from my prize BA is eternally learned and careful, henceforth).

>

> > We all know this, right, but how many of us actually run down the  
> > filaments 5-10% when in low power/standby modes, or ramp up the voltages  
> > every time we fire up behemoth? (:+}}...., or was that Bertha.....

>

> ....Wellllll...>blush<. Some of us aren't running anything bigger than  
> a single 6L6 or P-P '42s; the inrush isn't as significant in a low-power  
> transmitter. However, I \*will\* be using sperate transformers for heater  
> and B+ supplies in my 'phone rig, unlike the original version. It makes  
> the control circuitry a lot simpler, in addition to being easier on the  
> tubes.

I would not worry too much about 6L6's and the like. Any tube under the 100 number but over 9 in value and dating from WWII days and earlier, I would still variac or ramp up if possible. Them dern things is gettin dear to to BA budget, these days. I be speakin' of things like 10's, 11's, 20/30/40/50/70 series things of such remarkable warm glow. 10's/30's/41's/42's/45's/etc are getting scarce to have blow, inadvertently.

Late octals and minis/subminis I would not usually give a flippet about. Flip the switch on those and run.

Early octals (metalshells) I would probably sequence step on filaments first and HV second after warmup.

Any transmitting tubes, anymore, I would likewise do, and if filamentary, always variac up the filaments first to temp for a couple of minutes, before HV.

My conscience gets to me if I am not careful about these glass critters. Back in my pre-ham, unknowing days when I had not seen the light, I was known to take the excess tubes out to the rifle range and plug away, with lead rather than sockets ----- what a fool be I in them days.

>

> In re receivers, it's important to note that the original "standby"  
> switching on many of them merely opens the center-tap of the plate  
> transformer. This can be problematic in some instances, and puts the  
> entire B voltage across that switch when it is open; any replacement needs



> to be suitably rated for the voltage. Many of the originals were not!  
> (Look out for fuses in center-taps, too--when they pop, you can still get  
> zapped from the HV AC, core arcover remains possible (all the more so  
> with no load on the transformer, inherent regulation of E-I core iron  
> being what it is), AND the fuse holder can wake you right up (or worse) if  
> you go to change the fuse with everything still on!)

Good points. Although most of my RX-anchors run on dynamotors or batteries,  
except for the R-388, and the R-390. They is much quieter on the top band.

Later tube RX gear from the postwar era and things like Nationals from  
the 30s one should always be careful of getting zapped inadvertently along  
the connections, TR switching circuits, headphone leads (yes, some of them  
have B+ on the headphone leads --- OUCH), etc.

>  
> 73,  
> --Bobbi  
>

One has to remember, that most of the tubes one finds at hamfests, and  
the like these days are as likely to be run down pulls as new tubes.  
How many folks have just swapped tubes over the years and put the burned  
out or run down ones back in the box and back into the shelf stock in  
the shack for ``future emergency use''. Then these things show up at  
the hamfests with decomposing boxes and we takes our chances and plays  
our hunches. Most of the time we come out OK. Sometimes, well.....  
The boxes are mostly opened up, and you takes what you can get, and  
run home to the tester to see if there is any life left in the glass critters.  
If I come home from anywhere and the tubes check out at better than 50%  
usable I consider myself as having had a good haul. The residual is just  
operating losses (even in the hobby, noless).

Other points well taken....

Maybe these sorts of things should be listed in the BA faq for  
reverence/reference, etc. I know we need to get all the proper  
methods together for flashing thoriated tungsten filaments.  
More food for future thought.....

73  
Bob  
NA4G

From boatanchors@theporch.com Tue Jan 17 20:30:17 1995  
Date: Tue, 17 Jan 1995 18:04:31 -0600  
Message-Id: <9501180004.AA18946@cybernetics.net>

From: ab4el@cybernetics.net (Stephen Modena)  
Subject: Charlotte Hamfest

Someone asked:

Charlotte Hamfest and ComputerFair -- 1995  
"Largest Indoor Hamfest in the SouthEast"

- - -

March 11 & 12  
Saturday 9 am to 5 pm  
Sunday 9 am to 2 pm

- - -

Charlotte Merchandise Mart  
2500 E. Independence Boulevard -- Liberty Hall

CONTACT: Charlotte Hamfest, PO Box 221136, Charlotte, NC 28222-1136  
(SASE -- mail back deadline 26 Feb. then ticket held at door)

ARRL Roanoke Division Conference

Forums - Exams - Manufacturers - Dealers - SwapFest

PreRegistration Tickets \$6 -- At door \$8  
SwapFest Tables (6 ft--advance only) \$18  
Chairs \$1  
Electricity \$50  
TICKETS AND TABLES VALID BOTH DAYS

Early unloading timed by number of tables you have

NOTICE Merchandise Mart parking is \$4....so car pool it!

WALK-IN EXAMS first come, first served  
Charlotte VEC: Sunday March 12 at 9 am  
Form 610 available on site  
\$5 fee IN CASH  
Positive photo ID  
ORIGINAL & XEROX of an license and CSCEs

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From boatanchors@theporch.com Tue Jan 17 18:22:31 1995  
Date: Tue, 17 Jan 1995 16:01:09 -0600  
Message-Id: <Pine.SUN.3.91.950117165448.26693A-100000@access1.digex.net>  
From: Tony Stalls <rstalls@access.digex.net>

Subject: CQ Anniversary Issue

I just got hold of the January 1995 issue of CQ Magazine and they've included a 50 year retrospective. I haven't read it, but perusing just the ads they've reproduced made buying it worthwhile. (Remember the Heath AT-1 for \$29.50, the AR-2 for \$25.50 plus 4.50 for the cabinet, BC-455's for \$7.95, and the Viking I for \$209.50? Sigh....)

73,

Tony  
K4KY0

From boatanchors@theporch.com Tue Jan 17 20:47:45 1995  
Date: Tue, 17 Jan 1995 18:00:49 -0600  
Message-Id: <Pine.3.89.9501171532.A26371-0100000@netcom6>  
From: paul Veltman <veltman@netcom.com>  
Subject: Re: CQ Anniversary Issue

On Tue, 17 Jan 1995, Tony Stalls wrote:

> I just got hold of the January 1995 issue of CQ Magazine and they've  
> included a 50 year retrospective. I haven't read it, but perusing just  
> the ads they've reproduced made buying it worthwhile. (Remember the Heath  
> AT-1 for \$29.50, the AR-2 for \$25.50 plus 4.50 for the cabinet, BC-455's  
> for \$7.95, and the Viking I for \$209.50? Sigh....)

>

> 73,

>

> Tony  
> K4KY0

>

>

Yeah but,

That was when you were making good money at \$2.00 per hour and could feed a family without having the XYL working also. I had a bunch of those old 1950s CQs that I saved (it was a MUCH better mag in those days), and I figured that for what you get, and what the average earning power was, the new rice boxes are a much better deal. The real price of ham gear has gone down over the last 50 years.

Regards,

Paul WA6OKQ

From boatanchors@theporch.com Tue Jan 17 11:36:42 1995  
Date: Tue, 17 Jan 1995 08:44:16 -0600  
Message-Id: <9501171447.AA06484@jsun.agen.okstate.edu>  
From: vmike@agen.okstate.edu (Mike Veldman)  
Subject: filter chokes

greetings,

I'm looking for an idea or two, that maybe one of you may provide. I build a fair amount of ba homebrew type equipment and the power supplies to match, and over time have aquired a fairly large stash of parts. The problem being that after using first the filter chokes with labels or tracable part numbers on them I'm left with the unlabeled ones. My question is, does anyone know a method for determining the current rating of an unknown choke? I'd appreciate some suggestions. Thanks, now back to lurking. I enjoy the group a great deal.

mike  
WDOCTA

~.

From boatanchors@theporch.com Tue Jan 17 12:11:50 1995  
Date: Tue, 17 Jan 1995 09:15:23 -0600  
Message-Id: <9501171503.AA09608@uvs1.orl.mmc.com>  
From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)  
Subject: RE: filter chokes

Well the way I used to check them (and caps) was with an ac source (I used a 6.3 transformer, load resistance, and an O'scope. The technique was pronounced "Lisi-juice" patterns but do not recall how to spell it (Lisijous ?).

What you do is to use the "external sweep" input to the scope and create the following series circuit:

- 1) To one terminal on the transformer connect the load resistor (think I used a 5K) and the external sweep lead.
- 2) Connect the output of the resistor to the input of the inductor and to the Y input to the scope
- 3) Connect the output of the coil and the scope return to the other terminal on the transformer.

When powered up, a circular/eliptical pattern will appear on the screen that can be calibrated to the value of the inductor.

Am sure some others can point out calibration methods.

Warmly,  
Padgett

From boatanchors@theporch.com Tue Jan 17 22:22:21 1995  
Date: Tue, 17 Jan 1995 20:00:35 -0600  
Message-Id: <Pine.SUN.3.91.950118130153.1290A-1000000@eram.esi.com.au>  
From: Dave Horsfall <dave@esi.com.au>  
Subject: RE: filter chokes

On Tue, 17 Jan 1995 padgett@tccslr.dnet.mmc.com wrote:

> Well the way I used to check them (and caps) was with an ac source (I used  
> a 6.3 transformer, load resistance, and an O'scope. The technique was  
> pronounced "Lisi-juice" patterns but do not recall how to spell it  
> (Lisijous ?).

Lissajous.

--

Dave Horsfall (VK2KFU) | dave@esi.com.au | VK2KFU @ VK2AAB.NSW.AUS.OC | PGP 2.6  
Opinions expressed are mine. | E7 FE 97 88 E5 02 3C AE 9C 8C 54 5B 9A D4 A0 CD

From boatanchors@theporch.com Tue Jan 17 11:02:48 1995  
Date: Tue, 17 Jan 1995 08:13:55 -0600  
Message-Id: <9501171441.AA118379@csemail.cropsci.ncsu.edu>  
From: rdkeys@csemail  
Subject: Re: Frostfest

>  
> OK BA'ers, where were you?

> Tony  
> K4KY0

You were the 5th one there, from what I can tell.

NA4G/Boatanchor Bob  
KD4CPL/Nick  
Bob Scott  
Tom Bryan

plus 3 other serious boatanchorites from Raleigh who unfortunately don't  
have internet access, but I have run with for many years.

Ya musta missed da logo cuz da rest ov us found each other!

Oh, well, next biggie is Charlotte and then Raleigh for fests, so see the BA logo there!

73/Bob/NA4G

From boatanchors@theporch.com Tue Jan 17 11:10:45 1995  
Date: Tue, 17 Jan 1995 08:38:19 -0600  
Message-Id: <Pine.3.89.9501171536.A24050-0100000@inet.uni-c.dk>  
From: MEC <danmec@inet.uni-c.dk>  
Subject: Re: Frostfest

>From all us ignorants:

What the devil is Frostfest ?

73 Rag OZ8R0

On Tue, 17 Jan 1995 rdkeys@csemail.cropsci.ncsu.edu wrote:

> >  
> > OK BA'ers, where were you?  
>  
> > Tony  
> > K4KY0  
>  
> You were the 5th one there, from what I can tell.  
>  
> NA4G/Boatanchor Bob  
> KD4CPL/Nick  
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>  
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> have internet access, but I have run with for many years.  
>  
> Ya musta missed da logo cuz da rest ov us found each other!  
>  
> Oh, well, next biggie is Charlotte and then Raleigh for fests, so  
> see the BA logo there!  
>  
> 73/Bob/NA4G  
>  
>

>

From boatanchors@theporch.com Tue Jan 17 12:44:34 1995  
Date: Tue, 17 Jan 1995 09:35:14 -0600  
Message-Id: <Pine.SUN.3.91.950117103027.5138B-100000@access1.digex.net>  
From: Tony Stalls <rstalls@access.digex.net>  
Subject: Re: Frostfest

On Tue, 17 Jan 1995 rdkeys@csemail.cropsci.ncsu.edu wrote:

> >  
> > OK BA'ers, where were you?  
>  
> > Tony  
> > K4KY0  
>  
> You were the 5th one there, from what I can tell.  
>  
> NA4G/Boatanchor Bob  
> KD4CPL/Nick  
> Bob Scott  
> Tom Bryan  
>  
> plus 3 other serious boatanchorites from Raleigh who unfortunately don't  
> have internet access, but I have run with for many years.  
>  
> Ya musta missed da logo cuz da rest ov us found each other!

I obviously gotta' get an appointment with my eye doc! :^)

> Oh, well, next biggie is Charlotte and then Raleigh for fests, so  
> see the BA logo there!

When???

73,

Tony  
K4KY0

From boatanchors@theporch.com Tue Jan 17 20:31:48 1995  
Date: Tue, 17 Jan 1995 17:48:51 -0600  
Message-Id: <9501172348.AA17471@cybernetics.net>  
From: ab4el@cybernetics.net (Stephen Modena)  
Subject: Re: Frostfest

>  
> >From all us ignorants:  
>  
> What the devil is Frostfest ?  
>  
> 73 Rag OZ8RO  
>

In the U.S.A., we have hamfests...ham radio club sponsored gatherings for selling-trading-meeting. Probably you know about that.

FrostFest comes from this:

Frost (time of the year) (ham)Fest

The Virginia Frostfest is in an Atlantic coastal state that \*usually\* does not have much snow in the coastal areas....but does have skiing in some of it's interior moutains.

If that hamfest were held farther North at this time of year, it might named IceFest or something similar. :^)

We give special names to some of the hamfests in the winter months because there are so few of them and sometimes one must be "brave" to be a "tail-gater."

A "tail-gater" is a person who comes to the parking lot of the hamfest, opens the trunk (boot) of the car to show his radio gear..or brings a table and puts gear on that...in the open air parking lot. This is also called the "flea market." :^) It's an \*excellent\* social aspect of these hamfests.

--

73/Steve/AB4EL ab4el@Cybernetics.NET in Raleigh, NC 35.81245N, 78.65849W

From boatanchors@theporch.com Tue Jan 17 11:02:59 1995

Date: Tue, 17 Jan 1995 08:30:54 -0600

Message-Id: <9501171430.AA12627@wrdis01.robins.af.mil>

From: lakeith@wrdis01.robins.af.mil (Larry Keith )

Subject: Heath CW filter

Did someone have a Heath CW filter for sale.. If so, please contact me.

73,

Larry Keith, KQ4BY  
lakeith@robins.af.mil



From boatanchors@theporch.com Tue Jan 17 13:00:54 1995  
Date: Tue, 17 Jan 1995 08:47:02 -0600  
Message-Id: <9501171512.AA118449@csemail.cropsci.ncsu.edu>  
From: rdkeys@csemail  
Subject: Re: Homebrew Trans!

>  
> Greetings again, kindelers of the filament!

FB OM DE NA4G/Bob, kindler of '01A's 211s 813s etc.

>  
> A bit of advice, for a while now, I've been driven to distraction  
> by N9GT's 6L6 transmitter on pg.8 of the Sept. 94 ER... A thing of near  
> stone-simple beauty it tis... And best of all, I have many of the parts  
> rqd. to brew it up.

Go for it. Simple rigs are wonderful to work with. You can ``read''  
the schematic by just looking at the circuit works on the chassis, if  
you think a bit about it. That makes for easy servicing.

>  
> 1.) In the article, Jack said he used a piece of miniductor stock  
> and "experimented with the coil taps for best output"... Well, would some  
> of you veteran brewers o' the bottle pass this knowledge to us newcomers?

If the coil is in a hartley oscillator of any sort, tradition and practice  
generally sets taps as follows:

For triode tubes, tap at about 1/3 up from ground.

For tetrode/pentode tubes, tap at about 1/5 to 1/10 up from ground.

The difference has to do with the gain of the tube.

If the coil is in an output circuit, and I am assuming PI net output  
as the usual sort of thing, then again, certain rules of thumb follow:

Taking a coil form of 1 inch in diameter to 1.5 inch in diameter,  
and using no. 16 or no. 14 wire for the coil, about 50-60 turns is good  
for 160 meters, 25-30 turns for 80 meters, 12-15 turns for 40 meters,  
6-8 turns for 20 meters using tuning capacitances of 250 pf for 160  
meters, 150 pf for 80 meters, 100 pf for 40 meters and 50 pf for 20 meters.

Notice that it is anything but critical, unless building a kilowatt amp,  
where the parameters may need to be more closely approximated at full tilt.

All that is really required is that the output capacitance have some 1000pf of capacitance in the loading control (actually, unless 160 meters is needed one can do nicely with a 365 pf broadcast variable of two sections tied in parallel), and the input (plate) tuning capacitance TUNE the coil/cap circuit to the frequency desired. For small rigs of 50 watts or less, the design is anything but critical. For kilowatt jobs, one probably needs to follow a design that will match the tube load impedances properly. For simple boatanchor classics, don't worry about it much, just keep the plate from glowing TOO red in use, and keep the power down to about 50 percent of the rated tube values and long life will invariably follow.

>

> 2.) The RFC to ground at the antenna connector is a bit nebulous  
> as well...

The RFC to ground in any antenna circuit is an automatic short circuit for gefusenblowen if the antenna coupling capacitor ever shorts. It is generally a good practice on any capacitively coupled output circuit. It is not needed for inductively coupled output circuits.

>

> 3.) Turning attention to the 6AG7 oscillator stage: I'm wondering  
> how the 15pf and 220pf cap. values hanging from the G1, to cath., to grnd.  
> were calculated??? It would be a simple matter simply to reproduce the  
> ckt. but then I would'nt learn anything!

General rules of thumb again follow the coil taps philosophy of the Hartley oscillator when designing Colpitts or Tri-Tet oscillators.

For low gain tubes, tap at about 1/3 up from RF ground using the capacitive divider. For high gain tubes tap at about 1/5 to 1/10 up from RF ground. For the 15pf/220pf divider, that is about 1/15 up from RF ground. I would consider that a bit light, and opt for a ratio of 20/220 pf. But, if it works, don't worry!

>

> 4.) How much greater Pwr. supply demand would there be (if any) to  
> substitute a 807 for the 6L6? :-)

6L6 tubes are rated for about 15 watts in RF service (unless running one of Fred Sutters QSL-100 monsters using 6L6's, or inverting the tube into a gallon can of transformer oil to dissipate the heat and running 100 watts out of said tuffy 6L6..... (:+{}.....).

807 tubes are rated for about 50 watts (can be pushed to 75) in RF service.

807's will work just fine on 6l6 voltages so a substitution is no sweat.

If running the 807 at design tilt of 50-75 watts, then the power supply for the 807 should be in the neighborhood of 500-750 volts, whereas the normal voltages on the 6L6 should probably not go beyond 350 volts (although 450 volts was commonly used it shortens tube life).

>

> 5.) It would be nice to take this lil' pup up to 20m, and maybe  
> beyond.... would doing this complicate the ckt; ie: necessitate the need  
> for a doubler/buffer stage??

If you want to go to 20 m you should probably use a doubler stage between any xtal oscillator and any final stages. You should be able to handle All bands with a 3 stage transmitter and xtals as high as 40 meters.

Gee, ain't that basically the ol' DX-60 then..... (:+}}.....

>

> Thats it for now ye' kindelers o' filaments...  
> Best of '73's, and thanks in advance for your sage input!  
> Carl, KN6AL

73/Bob/NA4G  
rdkeys@csemail.cropsci.ncsu.edu

```
*****
* 73 TU SU VA DE NA4G          ``Boat Anchor Bob'', an ol' CW fart.  *
*****
* Morse has been in the family for over 100 years.                      *
* Morse radiotelegraphy (Spark/CW) has been in the family since 1914.  *
*****
* May you have fair winds and following seas on your watch at the key.  *
*****
```

From boatanchors@theporch.com Tue Jan 17 14:53:11 1995  
Date: Tue, 17 Jan 1995 11:54:51 -0600  
Message-Id: <Pine.3.89.9501171245.C11488-01000000@indy1>  
From: "Roberta J. Barmore" <rbarmore@indynet.indy.net>  
Subject: Re: Homebrew Trans!

...Just a quick historical aside...

On Tue, 17 Jan 1995 rdkeys@csemail.cropsci.ncsu.edu wrote:

> 6L6 tubes are rated for about 15 watts in RF service (unless [...]  
> inverting the tube into a gallon can of transformer oil to dissipate the  
> heat and running 100 watts out of said tuffy 6L6..... (:+}}.....).

Known in the vernacular as a "nine-gamma-nine," for those in the crowd who weren't there at the time--the highfalutin' sort would use a brand-new gallon paint can for the trick. It'll keep your coffee warm, too. :) Not recommended, but it's an impressive-looking kludge. Umm, use a \*metal\* tube for this, glass 6L6s really don't like it!

(Hey, has anyone else seen the ads for "Kludge Labs" in late '40s editions of the E&E so-called "California Handbbok?" It even \*looks\* a bit, well, kludge-y in the photos!)

73,  
--Bobbi

From boatanchors@theporch.com Tue Jan 17 17:23:31 1995  
Date: Tue, 17 Jan 1995 14:16:20 -0600  
Message-Id: <9501172017.AA08885@wrdis01.robins.af.mil>  
From: lakeith@wrdis01.robins.af.mil (Larry Keith )  
Subject: Pre-Dayton Sale # 1

Gotta convert some stuff to cash, before Dayton..

Watkins Johnson Model R1401A VLF Receiver. Digital, Rack Mount, Excellent condition, with manual. \$425 plus shipping. Shipping weight is 45 lbs (in wooden crate).

RC-292 20 to 76 Mhz Antennas. Looks like a ground plane on top of a 40 foot mast. Includes mast sections, base, coax, tape, hammer, ropes, stakes, etc in a canvas carrying case. Includes manual. Very good to excellent condition. \$100 plus shipping. Shipping weight is 65 pounds.

OE-254/GRC 20 to 76 Mhz Antennas. Similar to RC-292, but looks like an hourglass. Replacement for the RC-292. Includes all parts and accessories as described for the RC-292. \$125 plus shipping. Shipping weight is 65 pounds.

73,

Larry Keith, KQ4BY  
lakeith@robins.af.mil

From boatanchors@theporch.com Wed Jan 18 00:09:07 1995  
Date: Tue, 17 Jan 1995 21:38:19 -0600  
Message-Id: <199501180338.WAA25808@altair.cs.unc.edu>  
From: Nick England <nick@cs.unc.edu>

Subject: R-388 conversion kit

For those who wanted to know the straight poop:

My R-388 has the following installed:  
"Collins Mechanical Filter Conversion Kit"  
Type No. 354A-1  
522-9046-002

I only have the F 500 B 14 filter but there are sockets for two more.

So now you know what it is when you find a batch of 'em at the next hamfest :-)

Nick KD4CPL, cross-eyed from correcting the mis-strung dial cord on the SX-42 I got Sunday. Man, stringing dial cord can be a chore in normal times, but when you are starting from something that isn't quite right it can be a real adventure. I finally figured out the weird bandspread arrangement on this thing - capacitor turns clockwise for some bands and counter-clockwise for others - all you gotta do is string two dial cords correctly and align the capacitor, two dial cord drums, and the dial on their respective shafts. Whew! But it sounds Great! What fun resurrecting old radios is !!

From boatanchors@theporch.com Tue Jan 17 13:35:39 1995  
Date: Tue, 17 Jan 1995 11:01:58 -0600  
Message-Id: <9501171701.AA19569@kali>  
From: wallace@jericho.mc.com (Andy Wallace)  
Subject: Re: R-388 filter kit

Geez, Rick, are you saying you got that filter kit WITH FILTERS for a buck?!?!?

Oh well -- keep me in mind if you stumble across another, and I'll certainly pay you more than \$1.

What's that "Beverages to Oscars" thing -- was that put out by the ARRL? (Speaking of which, where's Jim Kearman nowadays?)

I got the R-388 when I was graduating H.S. At the time, I was SW DXing on the HRO-50T1. Great receiver ... but I fell in love with readout to the kilocycle! <grin> My 388 had the front panel repainted -- great job, too. The guy hand lettered it and baked it in the oven for the wrinkle finish. I've seen pictures of the grey-panel R-388s but have never seen one in person.

From boatanchors@theporch.com Tue Jan 17 08:50:34 1995  
Date: Tue, 17 Jan 1995 06:35:40 -0600  
Message-Id: <9501171234.AA19252@kali>  
From: wallace@jericho.mc.com (Andy Wallace)  
Subject: R-388/51J-3 & \_RED\_ slide switches

I guess this is a general question, so I will ask the whole List...

Is there any way to convert an R-388 to a 51J-4 by adding a mechanical filter kit? (And I assume that's an R-388A, right?) Some time ago in the Yellow Sheets, I saw someone advertising such a Collins mod kit..for more money than I wanted to pay (grin).

Second question: has anyone here bought one of those "Jupiter Superknobs" for their 75A-4? Do they include all the reduction gearing assembly, or is it just the knob? I'd love to install a reduction knob on my 388 but I'd hate to deprive a 75A-4 owner of a genuine Collins one -- not to mention I don't want to pay that much... <grin>

And finally: where can I get RED slide switches like on the S-38 and Drake 2-series radios?

--Andy

From boatanchors@theporch.com Tue Jan 17 12:30:21 1995  
Date: Tue, 17 Jan 1995 09:31:23 -0600  
Message-Id: <Pine.3.89.9501170904.A13782-0100000@ozarks>  
From: "C. Frank Gilmore" <fgilmore@ozarks.sgcl.lib.mo.us>  
Subject: Re: R-388/51J-3 & \_RED\_ slide switches

On Tue, 17 Jan 1995, Andy Wallace wrote:

>  
> I guess this is a general question, so I will ask the whole List...  
>  
> Is there any way to convert an R-388 to a 51J-4 by adding a mechanical  
> filter kit? (And I assume that's an R-388A, right?) Some time ago in  
> the Yellow Sheets, I saw someone advertising such a Collins mod kit..for  
> more money than I wanted to pay (grin).

Yes Andy those kits used to be pretty common. I put one or two in 388s in the 60's. Last one I saw sold at hamfest locally had the wide filter and brought \$150 or so.

>  
> Second question: has anyone here bought one of those "Jupiter Superknobs"  
> for their 75A-4? Do they include all the reduction gearing assembly, or is  
> it just the knob? I'd love to install a reduction knob on my 388 but I'd  
> hate to deprive a 75A-4 owner of a genuine Collins one -- not to mention  
> I don't want to pay that much... <grin>

Going back in time again, I put a new 75A4 assembly on a 388 so it would match my 75A4/KWS-1 pair. Tedious job and while the tuning was smooth without the reduction unit it tended to be a bit stiff with it. One of the fellows at the factory told me it should never have been put on there because of design differences. I finally removed it and put a 51J4 knob on it. I haven't seen the Jupiter knob or talked to anyone who has used one.

> And finally: where can I get RED slide switches like on the S-38 and  
> Drake 2-series radios?

Some of the cheap and dirty tube testers that came over from Japan in droves in the mid 60's (as well as other similar test equipment) had the red slide switches. I tore one apart for that purpose about twelve years ago but think I used or swapped off all of them. Will look around.

73, de K0JPJ ex-W5PVX ...-.-

From boatanchors@theporch.com Tue Jan 17 12:59:31 1995  
Date: Tue, 17 Jan 1995 09:45:43 -0600  
Message-Id: <2185@sat.ampr.org>  
From: ki5sl@sat.n5lyt.ampr.org (Rick\_Blank)  
Subject: Re: R-388/51J-3 & \_RED\_ slide switches

In message <9501171234.AA19252@kali> wallace@jericho.mc.com writes:

>  
> I guess this is a general question, so I will ask the whole List...  
>  
> Is there any way to convert an R-388 to a 51J-4 by adding a mechanical  
> filter kit? (And I assume that's an R-388A, right?) Some time ago in  
> the Yellow Sheets, I saw someone advertising such a Collins mod kit..for  
> more money than I wanted to pay (grin).  
>

\*\*\*\*\*other stuff deleted\*\*\*\*\*

--

I just picked up a Vector Electronic Company, Inc. mechanical filter adapter kit at the recent San Antonio Radio Club's swapfest for \$1.00! It appears complete but has no instructions, I imagine that there were articles in some of the period magazines...I just used the Bibliography program "From Beverages to Oscars" to look up and see if there were any

references to such a feat in QST, but the only reference there was is in the January, 1954 issue and article about adding a mechanical filter to the 75A1. My buddy, K5LLK, has already spoken for the kit, sorry!

Also, a recent query was put on the list asking about the desirability of the 75A1 vs. the R-388....I have had a 75A2 but sold it a couple of years ago and do have 3-75A3's....performance wise I would say that the early "A" series is very comparable to the R388 and would consider the two radios about equal, but, I would prefer a nice, clean, and complete R388 to the A2 just because the 388 has more than the ham bands. My R388 and my 51J-4 are my two favorite receivers..."Hollow State News" ran a couple of articles on the "J" series in some of their issues a while back with some good info on the rigs....

Rick Blank, KI5SL  
ki5sl@sat.ampr.org  
2223 Blanco Road  
San Antonio, Texas 78212  
end

From boatanchors@theporch.com Tue Jan 17 12:33:18 1995  
Date: Tue, 17 Jan 1995 09:42:01 -0600  
Message-Id: <9501171534.AA100702@rs2.ccd.harris.com>  
From: dsnowden@rs2.ccd.harris.com (Doug Snowden)  
Subject: R390 meters

I have never owned an R390 and don't want to, but I have noticed comments that these things are without meters most of the time. Guess it was because they had radioactive paint on them. Anyway, I noticed in the last issue of Amateur Trader Magazine someone had them for sale NIB

Doug N4IJ dsnowden@ccd.harris.com

From boatanchors@theporch.com Tue Jan 17 13:37:53 1995  
Date: Tue, 17 Jan 1995 11:05:56 -0600  
Message-Id: <9501171623.AA05555@cen.com>  
From: gc@fox.gsfc.nasa.gov (Gary Chatters)  
Subject: Re: R390 meters

Doug writes:

>

>I have never owned an R390 and don't want to, but I have noticed  
>comments that these things are without meters most of the time.



I have seen those comments on this list. But offhand I don't recall ever seeing one without meters. These are the ones that show up at hamfests.

```
>Guess it was because they had radioactive paint on them. Anyway,  
>I noticed in the last issue of Amateur Trader Magazine someone  
>had them for sale NIB
```

I frequently see people selling replacement meters for R-390(A)'s at hamfests.

I never really looked closely to see if most of the meters on these radios are the original or if they are non-radioactive replacements.

Gary

From boatanchors@theporch.com Tue Jan 17 12:39:04 1995  
Date: Tue, 17 Jan 1995 09:38:36 -0600  
Message-Id: <9501171533.AA04593@cen.com>  
From: gc@fox.gsfc.nasa.gov (Gary Chatters)  
Subject: Re: T-pad network for the Ranger

Chris asks about power dissipation in a T network attenuator:

```
>
>The network looks like this:
>
>
> RFIn -> -----/\ /\ /\ /\ /\ /-----/\ /\ /\ /\ /\ /----- -> RFout
>                               R1                R2
>                               |
>                               |
>                               /
>                              \|
>                             /
>                            \|
>                           /
>                          \|
>                         |
>                         |
>                        GND
```

>For 50 ohm input and output impedance, and 6 dB attenuation, R1 and R2  
>are 16.7 ohms, and R3 is 67 ohms.

>Here's the REAL stupid question...what power rating should the resistors

>have in this network? Common sense says 10w, for a dissipation of 30w  
>(35-40w in, 10w out), but I'm sure Ohm's law has a trick up its sleeve of  
>which I'm ignorant. Anybody build one of these?  
>

Ohm's law doesn't have any tricks up its sleeve here. The analysis  
is rather straight forward. The answer is not 10W per resistor, however.

I was going to try to analyze this later tonight, then realized it  
is quite trivial. The easy approach to the problem is to just  
figure out what fraction of the total power is dissipated in  
each resistance. Start by figuring the fraction of the power  
dissipated by R1. The numbers make it easy to figure most of  
it in your head.

Here are some of the tricks to building this:

Figure about a 2X overrating in the power rating of the resistors.

This is RF. Use non-inductive resistors (not wire-wound).

30Watts is a lot of power if dissipated in a small area,  
be sure the attenuator has ventilation to keep it cool.

Any other advice from the list?

73,

Gary

From boatanchors@theporch.com Tue Jan 17 11:02:04 1995

Date: Tue, 17 Jan 1995 07:52:00 -0600

Message-Id: <9501171343.AA08984@uvs1.orl.mmc.com>

From: padgett@tccslr.dnet.mmc.com (A. Padgett Peterson, P.E. Information Security)

Subject: T0s in SF ?

Am going to be in San Francisco this weekend (Jan 21-22) for a meeting  
and would not mind going home with a nice Zenith TransOceanic, either  
a late 600 with Long Wave or a 7000 (horrors) preferred. If anyone has  
such for sale, or knows of one in the area, I would appreciate a note  
to either the above address or padgett@goat.orl.mmc.com.

Warmly,  
Padgett

ps have a long history of bringing strange things home on airplanes.  
At one time it was Coors & Olympia beer, once it was a seven foot  
Japanese fan. The most trouble was the full length console for a

1967 Grand Prix - is half metal (set off every alarm), half delicate plastic, and a bit over five feet long. Have found that either the half seat by the galley or a seat just in front of a bulkhead is best.